

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

February 22, 1983

TELEPHONE
(704) 373-4531

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket Nos. 50-369, 50-370

Dear Mr. Denton:

The McGuire Unit 1 Operating License contains a condition 2.C.(11)g. which requires:

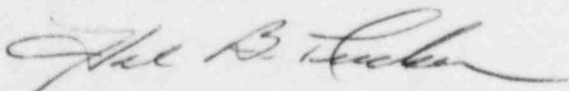
"Prior to exceeding 50% power the licensee shall complete the described turbine trip tests to verify that PORVs will not be challenged when the anticipatory trip bypass is in effect."

This test was performed and the results were reported in the McGuire Startup Report. After review of the Startup Report, the NRC Staff reviewer concluded that the test was not conducted as a turbine trip test but rather as a reduction of load on the turbine generator. The reviewer did not believe that the test as conducted was as severe a transient on the reactor coolant system as the Staff intended. Performance of the test in the described manner was discussed with the NRC Project Manager, the Reactor Systems Branch reviewer and the Procedures and Test Branch reviewer in September 1981. All agreed that the proposed test was acceptable.

Duke Power Company agrees that the description of the test in the Startup Report does not accurately portray the test. Attachment 1 is a revised description of the test method and results which gives a better indication of the actual test conditions. This description was also submitted as Supplement 4 to the Startup Report on February 21, 1983.

In summary, it is concluded that Duke Power met the license condition on Unit 1 since the test was performed satisfactorily using a test method which was agreed to by the NRC Staff.

Very truly yours,



Hal B. Tucker

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Add: R. Licciardo
B. Clayton
W. Long
J. Rosenthal
M. Duncan
R. Birkel

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cc: Mr. W. T. Orders
NRC Senior Resident Inspector
McGuire Nuclear Station

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

ATTACHMENT

8.11 Unit Loss of Electrical Load Test at 48% Full Power

The purpose of this test was to demonstrate the ability of the primary plant, secondary plant, and automatic reactor control systems to withstand a total loss of Electric Generator load - thereby verifying the ability of the unit to handle a load rejection transient. Also, it was performed to acquire data to evaluate the interaction between control systems in response to the load rejection. Another purpose was the verification of the proper response of the Steam Dump Control System. Finally, this test was performed to demonstrate that the Pressurizer Power Operated Relief Valves (PORV's) will not open during a load rejection from the highest power level at which there is no anticipatory reactor trip upon turbine trip.

Prior to the load rejection, the following control systems were verified to be functioning properly in automatic mode: Reactor Rod Control System, Pressurizer Level Control System, Pressurizer Pressure Control System, Steam Generator Level Control System, Steam Dump Control System, and Main Feedwater Pump Speed Control System. All pressurizer and main steam relief and safety valves were verified to be operable. For a five minute period of time prior to the load rejection, the following unit parameters were determined to be stable: Reactor Power, Reactor Coolant System Average Temperature, Reactor Coolant System Pressure, Steam Generator Levels, and Feedwater Flows. Reactor Power was approximately 48% full power, the turbine-generator was at 498 MW, and Control Bank D was at 200 steps withdrawn.

Data gathering devices used in this test were the Unit Operator Aid Computer (OAC), high speed chart recorder, and stopwatch. The test was initiated by manually placing both main generator breakers in their trip position. Thus, the load on the turbine dropped to zero megawatts, and the turbine was kept at 1800 rpm in Speed Control. The reactor ranback in automatic control to approximately 7% full power. Five out of the nine Main Steam Bypass Valves to Condenser were completely open 12 seconds into the transient; the remaining four partially opened during the transient. All nine Main Steam Bypass Valves to Condenser were closed 246 seconds into the transient, but five partially opened again for up to 232 seconds. During the reactor runback, no operator action was necessary above 20% full power (except to swap from main to auxiliary feedwater nozzles). During the transient, the reactor coolant average temperature increased by 2.3 °F (from 570.3 °F to 572.6 °F). The Pressurizer Pressure Control System allowed a reactor coolant pressure increase of 69 psig (from 2227 psig to 2296 psig).

Neither the turbine nor reactor tripped. The pressurizer PORV's and safety valves and the steam generator safety valves did not open. Safety injection did not occur. All acceptance criteria were met.

This test is scheduled to be run again at the 100% full power level.